

The drawings were acknowledged as acceptable for examination purposes. Formal drawings will be provided after the application has been allowed.

Support for applicants' amendments can be found throughout the specification. Specifically, "storage compartments are defined by separation walls between them" is shown in Figs. 1-3 and page 3, lines 18-23.

Claims 1-5 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants have hereinabove amended claims 1 and 2, which are maintained to be definite within the meaning of 35 U.S.C. § 112. The phrase "with one and the same orientation of the sample tube with respect to the frame" means that a sample tube can be inserted into or removed from the frame from either the top or bottom along a single axis of movement. Applicants maintain that this language complies with 35 U.S.C. § 112.

In view of the above, applicants request that all rejections based on 35 U.S.C. § 112, second paragraph, be withdrawn.

Applicants' claimed invention is a rack for use in a compound handling system for handling a multiplicity of tubes containing aliquots of chemical or biological samples. The rack comprises a single piece frame, storage compartments within said frame, and means for retaining a sample tube within each of the storage compartments. The single piece frame has a top side and a bottom side. The storage compartments within the frame are each configured and dimensioned to receive a sample tube containing a chemical or biological sample. The storage compartments are adjacent to each other and defined by separation walls between them. Each of the storage compartments has an inner wall and

is open at the top side of the frame and open at the bottom side of the frame so that a sample tube is insertable into the storage compartment from either the top side of the frame or the bottom side of the frame and is removable from the storage compartment from either the top side of the frame or the bottom side of the frame with one and the same orientation of the sample tube with respect to the frame. The means for retaining a sample tube within each of the storage compartments are an integral part of said frame. Said retaining means are a part of the inner wall of each storage compartment, that part of said inner wall being configured and dimensioned to cooperate with a part of the outer wall of a sample tube for retaining the sample tube at a predetermined position within the compartment.

Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by both Leoncavallo (U.S. Patent No. 5,080,232) and Schwartz (U.S. Patent No. 5,579,929).

Leoncavallo does not disclose any storage compartments for a sample tube, but only openings or cutouts 24 of a shelf 12 through which a sample tube can be inserted. These openings are associated with retaining means 34. However, the retaining means disclosed by Leoncavallo do not retain a sample tube at a predetermined position, but at any position within a predetermined range. Moreover, Leoncavallo only discloses insertion of a sample tube into openings 24 from above (see column 3, lines 39-41, and Fig. 7). Nowhere does Leoncavallo even hint at inserting a sample tube into openings 24 from below. In fact, insertion of the tubes from below is not possible with the shapes of the tubes and the shapes of the retaining means disclosed by Leoncavallo.

Schwartz does not disclose storage compartments for sample tubes, but openings or cutouts of a base plate 11 through which sample tubes can be inserted. These

openings are not adjacent to each other and are not defined by separation walls between them as is required in applicants' claim 1. The openings shown by Figures 14-17 of Schwartz have retaining means 24, 25, 51, but these retaining means do not retain a sample tube at a predetermined position. Like Leoncavallo, retention of the sample tube is at any position within a predetermined range. Column 1, lines 41-44, points out as aim the possibility of arresting the workpiece (e.g. a sample tube) at different levels. Column 6, lines 14-17, points out the need for an abutment for the workpiece so that it can be positioned exactly. Furthermore, as with Leoncavallo, Schwartz only discloses insertion of a sample tube into compartment 14 from above, not from below. Insertion of the tubes from below is not possible with the shapes of the tubes and the retaining means disclosed by Schwartz.

In view of the above, applicants request that all rejections based on 35 U.S.C. § 102 be withdrawn.

Claims 1-5 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over various combinations of Leoncavallo, Schwartz, Berthold (U.S. Patent No. 5,048,957), and Verwohlt (U.S. Patent No. 5,514,343).

Claim 2 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Leoncavallo in view of Berthold.

As pointed out above, Leoncavallo does not disclose any storage compartment for a sample tube, but only openings or cutouts 24 of a shelf 12 through which a sample tube can be inserted. Therefore, Leoncavallo cannot suggest storage compartments each of which is adapted for holding an entire sample tube. Berthold discloses storage

compartments each of which is adapted to receive an entire sample tube, but the storage compartments disclosed by Berthold have no retaining means of the kind mandated by applicants' claims. Moreover, Berthold fails to disclose storage compartments that allow insertion of sample tubes from below. Therefore, no combination of Leoncavallo and Berthold can suggest applicants' invention of claim 2.

Claim 2 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Schwartz in view of Berthold. For the reasons indicated above, Schwartz fails to disclose storage compartments of the kind claimed by applicants. Although Berthold discloses storage compartments adapted to receive an entire sample tube, the storage compartments of Berthold have no retaining means of the kind claimed by applicants. Moreover, Berthold fails to disclose storage compartments that allow insertion of sample tubes from below. Therefore, no combination of Schwartz and Berthold suggest applicants' claimed invention.

Claims 3 and 5 are rejected in view of Leoncavallo and Verwohlt. For the reasons indicated above, Leoncavallo fails to anticipate or suggest a rack as claimed by applicants. The passage of Verwohlt cited by the Examiner does not concern the shape of the storage compartments, but the shape of the wells 16. Accordingly, it would make no sense to use the device disclosed by Leoncavallo in such a way that the projection of each opening snaps in a groove of the outer surface of a sample tube, because after that it would be difficult to remove the tube from the rack. These documents provide no motivation and guidance for one of ordinary skill in the art to make the combination suggested by the Patent Office. Therefore, a combination of the teachings of Leoncavallo and Verwohlt does not suggest applicants' claimed invention.

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Applicants point out that neither Verwohlt nor Berthold teach or suggest a rack having storage compartments each of which is open at both ends (top and bottom) as is required in applicants' claims, much less a rack that allows a sample tube to be inserted into the storage compartment from either the top side of the frame or the bottom side of the frame. Furthermore, there is no motivation in either of these documents to modify a rack so that a tube is removable from the storage compartment from either the top side of the frame or the bottom side of the frame with one and the same orientation of the sample tube with respect to the frame.

Claims 3 and 5 were rejected in view of Schwartz and Verwohlt. However, this rejection is unsound for the reasons set forth above with respect to claim 1. Moreover, one of ordinary skill in the art would not have been motivated to combine the disclosures of Schwartz and Verwohlt for the reasons set forth above with respect to Leoncavallo and Verwohlt.

No combination of Leoncavallo, Schwartz, Verwohlt, and Berthold teaches or suggests applicants' claimed invention. Therefore, applicants request that all rejections under 35 U.S.C. § 103 be withdrawn.

In view of the above, applicants request reconsideration, withdrawal of all rejections, and the issuance of a Notice of Allowance.

If a telephone conference would be of assistance in furthering prosecution of the subject application, applicants request that the undersigned attorney be contacted at the number below.

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No fee is required in connection with the filing of this Amendment. If any fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account 08-2525.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1 and 2 were amended as follows:

-- 1. (Amended) A rack for use in a compound handling system for handling a multiplicity of tubes containing aliquots of chemical or biological samples, which comprises:

a single piece frame, said frame having a top side and a bottom side;

storage compartments within said frame that are each configured and dimensioned to receive a sample tube containing a chemical or biological sample, said storage compartments being adjacent to each other and defined by separation walls between them, each of said storage compartments having an inner wall and being open at the top side of the frame and open at the bottom side of the frame so that a sample tube is insertable ~~within the inner wall of the storage compartment and~~ into the storage compartment from either the top side of the frame or the bottom side of the frame and is removable from the storage compartment from either the top side of the frame or the bottom side of the frame with one and the same orientation of the sample tube with respect to the frame, and

means for retaining a sample tube within each of said storage compartments, said retaining means being an integral part of said frame, said retaining means being a part of the inner wall of each storage compartment, that part of said inner wall being configured and dimensioned to cooperate with a part of the outer wall of a sample tube ~~in order to~~

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~~retain~~ for retaining the sample tube at a predetermined position within said compartment.-

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-- 2. (Amended) A rack according to claim 1, wherein each of said compartments is configured and dimensioned ~~to contain~~ for holding an entire sample tube. --